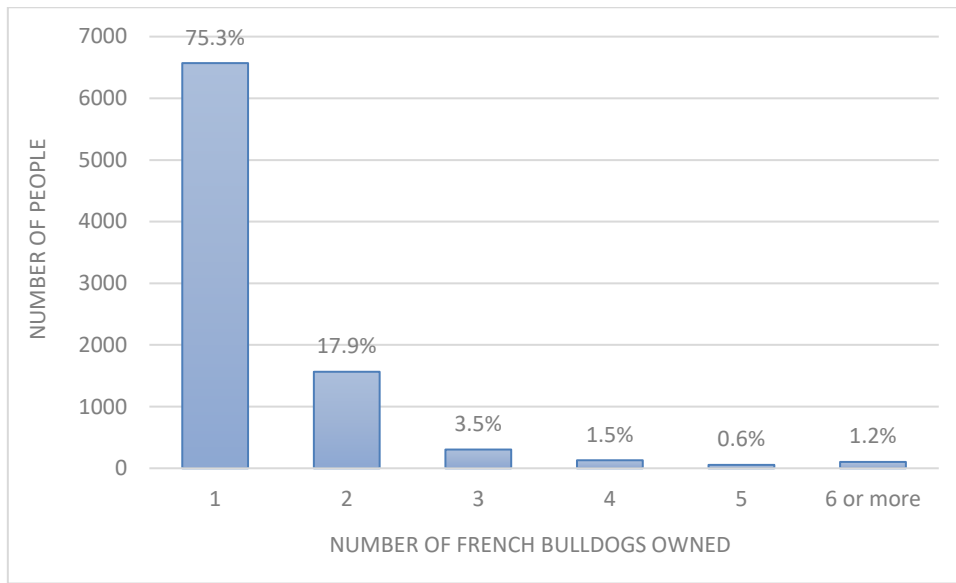


## French Bulldog Health Survey 2020

After removing all unusable responses (for example, respondents did not consent to French Bulldog Breed Clubs and the Kennel Club using the data for research purposes) a total of 8,727 individual responses remained, representing 12,025 dogs.

When asked how many French Bulldogs do you own, out of 8,727 responses, 6,570 (75.3%) answered '1', 1,565 (17.9%) answered '2', 304 (3.5%) answered '3', 130 (1.5%) answered '4', 55 (0.6%) answered '5', and 103 (1.2%) answered '6 or more'.



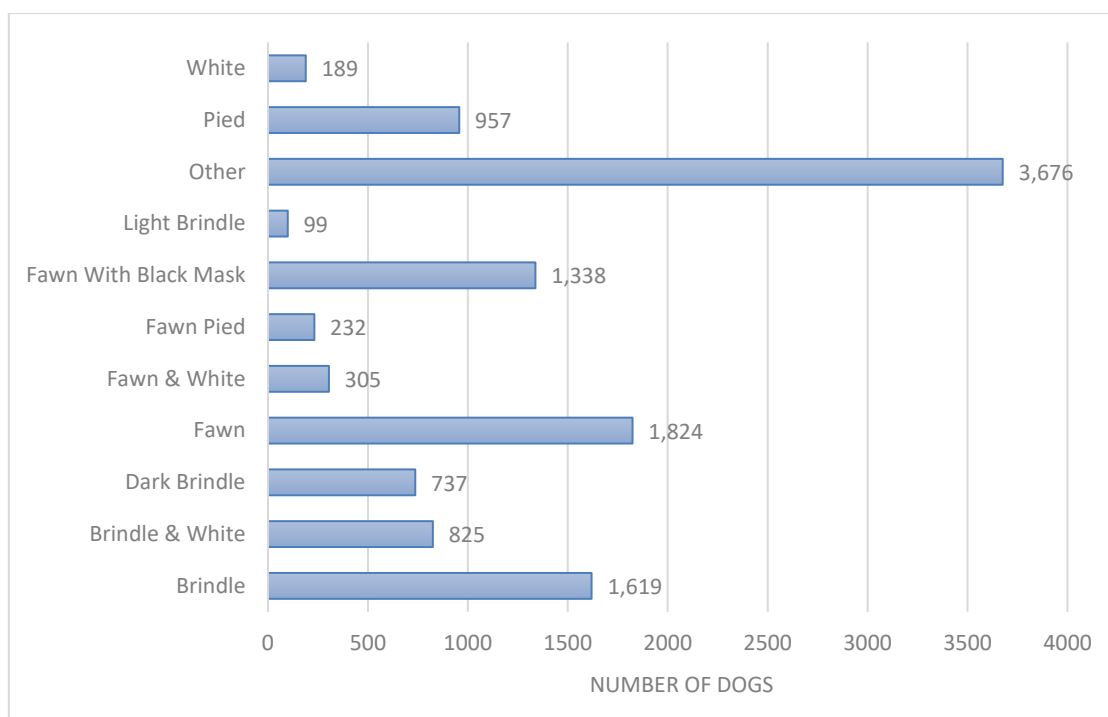
**Figure 1:** Number of French Bulldogs owned per person completing the survey

When asked the sex of their dog(s), out of 11,801 dogs, 53.2% were male and 46.8% were female. When asked the neutered status of their dog(s), 53.8% were entire and 46.2% were neutered. Results are shown in Table 1.

Sex	Neutered Status		Total
	Entire	Neutered	
Female	3,016 (25.6%)	2,508 (21.3%)	<b>5,524</b>
Male	3,329 (28.2%)	2,948 (25.0%)	<b>6,277</b>
<b>Total</b>	<b>6,345</b>	<b>5,456</b>	<b>11,801</b>

**Table 1:** Sex and neutered status of French Bulldogs included in the survey

When asked to specify the colour of their French Bulldog(s), out of 11,801 dogs, 31.2% were reported as 'other', 15.5% were fawn, 13.7% were brindle, 11.3% were fawn with black mask, and 8.1% were pied. Results are shown in Figure 2.



**Figure 2:** Colour of French Bulldogs included in the survey

The most common colours specified under ‘other’ were blue (n=807), blue and fawn (n=321), blue and tan (n=296), blue brindle (n=260), and black and tan (n=245).

### Lifestyle

Table 2 shows the duration of exercise the dogs included in this survey get on a typical weekday and weekend, where such responses were available. During both the weekdays and the weekend the majority of the French Bulldogs included in this survey are given over 2 hours of free running/playing in the garden and approximately 30 minutes to 1 hour of walking on the lead. Table 3 shows how active the French Bulldogs included in this survey are considered to be, with the majority considered to be moderately active (50.3%, 4,905 of 9,760).

Duration	Weekday exercise		Weekend exercise	
	Free running/playing in the garden	Walking on the lead	Free running/playing in the garden	Walking on the lead
Under 30 minutes	1,098 (11.1%)	2,733 (27.7%)	724 (7.4%)	2,012 (20.4%)
30 minutes to 1 hour	2,631 (26.6%)	4,715 (47.8%)	1,920 (19.5%)	3,886 (39.5%)
1 hour to 2 hours	2,337 (23.7%)	1,641 (16.6%)	2,384 (24.2%)	2,619 (26.6%)
Over 2 hours	3,536 (35.8%)	290 (2.9%)	4,548 (46.1%)	875 (8.9%)
None of the above	160 (1.6%)	427 (4.3%)	158 (1.6%)	391 (4.0%)
Not known	112 (1.1%)	64 (0.7%)	123 (1.1%)	68 (0.7%)
<b>Total</b>	<b>9,876</b>	<b>9,872</b>	<b>9,857</b>	<b>9,851</b>

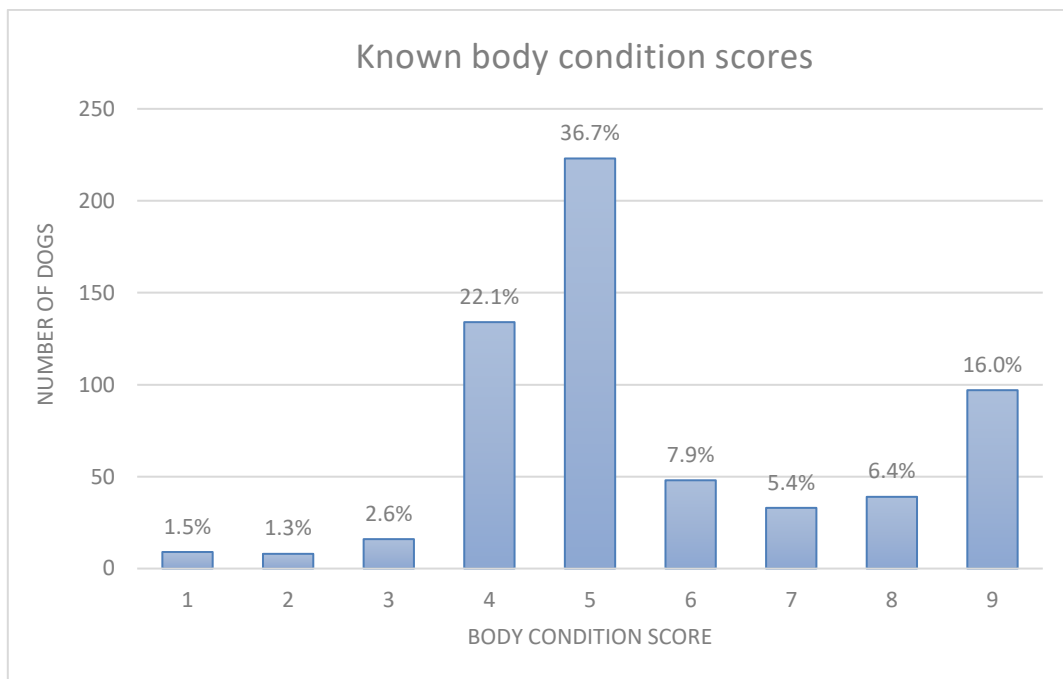
**Table 2:** The amount of exercise the French Bulldogs included in the survey get on a typical weekday and weekend

Activity	Number of dogs	Percentage
Highly active	2,678	27.4%
Mildly active	1,939	19.9%
Moderately active	4,905	50.3%
Not at all	237	2.4%
<b>Total</b>	<b>9,760</b>	

**Table 3:** Activity levels of French Bulldogs included in the survey, as perceived by their owners

When asked if any of their dogs have been body condition scored by a veterinary surgeon in the past 6 months, out of the 8,060 responses, 713 (8.9%) answered “Yes” and 7,347 (91.2%) answered “No”.

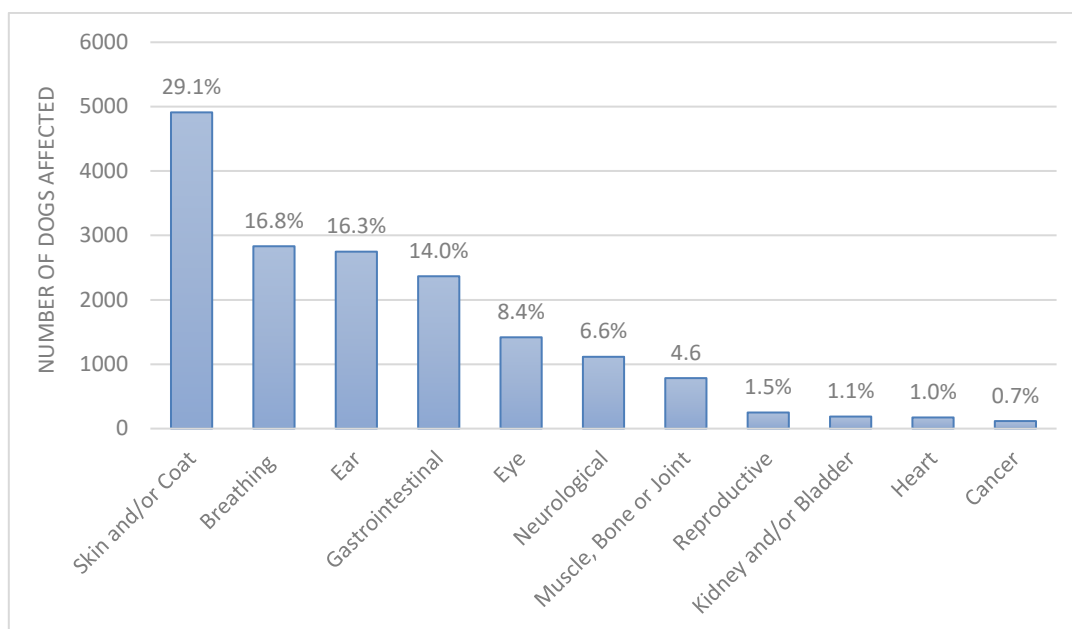
Out of 607 known body condition scores for the French Bulldog, the mean score was 5.65 (range 1-9). Figure 3 shows a breakdown of the scores.



**Figure 3:** Known body condition scores for the French Bulldogs included in the survey

## Health

The survey investigated the number of dogs affected by specific conditions within different categories: 'Breathing', 'Reproductive', 'Skin and/or Coat', 'Neurological', 'Ear', 'Eye', 'Gastrointestinal', 'Heart', 'Kidney and/or Bladder', 'Muscle, Bone or Joint', and 'Cancer'. Within each of these categories, the respondents were given a choice of specific conditions, the choices of "not known" and "other" were also given.



**Figure 4:** Overall summary of French Bulldog conditions reported in the survey

The data collected from this survey represents the total number of conditions selected by respondents about their dog(s). One dog might be affected by more than one condition (e.g. one dog may be affected by both food and environmental allergies) therefore the data often shows more conditions reported per category than number of dogs in that category.

The total number of specific conditions reported in this survey was 16,901. Out of the 16,901 specific conditions reported 29.1% were for 'Skin and/or Coat', 16.8% were for 'Breathing', 16.3% were for 'Ear', 14.0% were for 'Gastrointestinal', and 8.4% were for 'Eye'. The results for each category are given in Table 5.

Body system	Number affected	Percentage
Skin and/or Coat	4,911	29.1%
Breathing	2,832	16.8%
Ear	2,748	16.3%
Gastrointestinal	2,366	14.0%
Eye	1,418	8.4%
Neurological	1,115	6.6%
Muscle, Bone or Joint	784	4.6%
Reproductive	250	1.5%
Kidney and/or Bladder	187	1.1%
Heart	173	1.0%
Cancer	117	0.7%
<b>TOTAL</b>	<b>16,901</b>	

**Table 5:** Overall summary of French Bulldog conditions reported in the survey

*Please note:* the total number of dogs affected by a ‘Dental/periodontal’, ‘Haematological’, ‘Hepatic’ or ‘Hormonal’ condition are not included in the summary above because, prior to the survey, these were not considered to be a concern within the breed and therefore the total number of dogs affected by specific conditions within each category was not collected.

Nevertheless, 173 owners reported that their dog(s) had been affected by a dental/periodontal condition, 31 owners reported that their dog(s) had been affected by a haematological condition, 29 owners reported that their dog(s) had been affected by a hepatic condition and 75 owners reported that their dog(s) had been affected by a hormonal condition.

## **Breathing Conditions**

When asked if any of their dogs have suffered from a breathing condition(s), out of the 7,285 responses, 1,794 (24.6%) answered “Yes” and 5,491 (75.4%) answered “No”.

The total number of individual breathing conditions reported was 2,832. Of these, the most commonly reported condition was Brachycephalic Obstructive Airway Syndrome (BOAS), which affected 30.1% of the study sample (853 of 2,832). This was followed by stenotic nares (15.0%), elongated soft palate (14.2%), regular reverse sneezing (12.7%) and laboured breathing (8.9%). Table 6 shows the total number and percentage of dogs affected by each reported breathing condition in descending order.

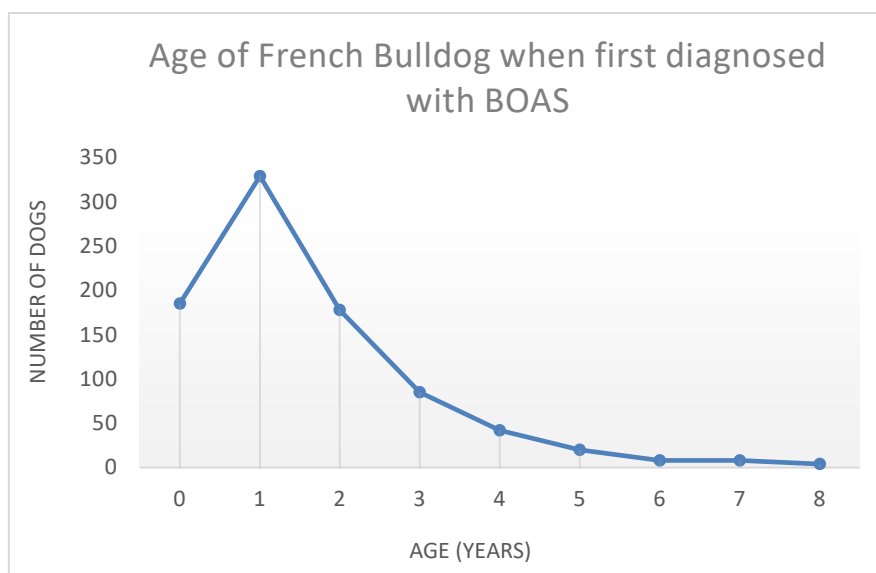
<b>Specific condition</b>	<b>Number affected</b>	<b>Percentage</b>
BOAS	853	30.1%
Stenotic nares	425	15.0%
Elongated soft palate	401	14.2%
Regular reverse sneezing	359	12.7%
Laboured breathing	253	8.9%
Aspiration pneumonia	90	3.2%
Kennel cough	72	2.5%
Nasopharyngeal turbinates	50	1.8%
Tonsil problems	48	1.7%
Laryngeal collapse	42	1.5%
Bronchiectasis	18	0.6%
Multiple upper respiratory tract problems	18	0.6%
Chronic rhinitis/ nose infection	17	0.6%
Lung lobe torsion	2	0.1%
Not known	106	3.7%
Other	78	2.8%
<b>Total</b>	<b>2,832</b>	

**Table 6:** Number and percentage of French Bulldogs affected by each specific breathing condition, as reported in the survey

The most common answers to “other” for breathing conditions not already listed in the survey were: laboured breathing/vomiting during hot weather or exercise (n=24),

regurgitation/reflux (n=10), snoring (n=9), reverse sneezing (n=9), sleep apnea (n=3) and allergies/hay fever (n=3).

The median age that French Bulldogs were first diagnosed with BOAS was 1 year. Figure 5 shows the total number of dogs diagnosed with BOAS per year of age.



**Figure 5:** The age of French Bulldogs when first diagnosed with BOAS, as reported in the survey

When asked if any of their dogs have had any form of upper airway corrective surgery, out of the 1,418 responses, 768 (54.2%) answered ‘Yes’ and 650 (45.8%) answered ‘No’. Owners that answered ‘Yes’ were also asked to specify how many of their dogs have had upper airway corrective surgery and a total of 825 French Bulldogs were reported to have had this form of surgery.

When asked if they had heard of the University of Cambridge/Kennel Club Respiratory Function Grading (RFG) Scheme, out of the 6,751 responses, 1,369 (20.3%) answered ‘Yes’ and 5,382 (79.7%) answered ‘No’.

When asked if their dog has been assessed under the University of Cambridge/KC RFG Scheme, out of the 7,130 responses, 396 (5.6%) answered ‘Yes’ and 6,733 (94.4%) answered ‘No’. Table 7 shows the known grades received in each dog’s most recent RFG Scheme assessment.

*Please note:* the total number of RFG Scheme results received by the Kennel Club to date (13/01/2021) for the French Bulldog is 211. This difference may be due to the results not being submitted, the results are still pending or that the owners simply did not understand the question.

Grade	Number of dogs	Percentage
0	189	48.2%
1	122	31.1%
2	65	16.6%
3	16	4.1%
<b>Total</b>	<b>392</b>	

**Table 7:** French Bulldog RFG Scheme results, as reported in the survey

## Reproductive Conditions

When asked if any of their dogs have suffered from a reproductive condition(s), out of the 6,705 responses, 235 (3.5%) answered “Yes” and 6,470 (96.5%) answered “No”.

The total number of individual reproductive conditions reported was 250. Of these, 26.8% were for male conditions (67 out of 250), 54.4% were for female conditions (136 out of 250) and 18.8% were for other/not known (47 out of 250).

Overall the most commonly reported reproductive condition across sexes was cryptorchidism, which affected 20.8% of the study sample (52 of 250). This was followed by pyometra (20.4%), pseudopregnancy (14.0%), mastitis (2.4%) and follicular cysts (1.6%). Table 8 shows the total number and percentage of dogs affected by each reported reproductive condition.

	Specific condition	Number affected
<b>Male conditions</b>	Cryptorchidism	52 (77.6%)
	Other	15 (22.4%)
	<b>Total</b>	<b>67</b>
<b>Female conditions</b>	Pyometra	51 (37.5%)
	Pseudopregnancy	35 (25.7%)
	Mastitis	6 (4.4%)
	Follicular cysts	4 (2.9%)
	Other	40 (29.4%)
	<b>Total</b>	<b>136</b>
Other (sex unknown)		5
Not known		42
<b>Total</b>		<b>250</b>

**Table 8:** Number and percentage of French Bulldogs affected by each specific reproductive condition, as reported in the survey

The most common answers to “other” for reproductive conditions not already listed in the survey were: prolapsed uterus (n=5), dystocia (n=5), uterus infection (n=4), inability to conceive (n=4), tumour/lumps (n=4), enlarged prostate (n=3), infrequent seasons (n=3), urinary tract infection (n=3), and hermaphroditism (n=2).

When asked if any of their dogs had ever been bred from, out of the 6,633 responses, 917 (13.8%) answered ‘Yes’ and 5,716 (86.2%) answered ‘No’. When asked if any of these dogs had ever had a caesarean section, out of the 913 responses, 548 (60.0%) answered ‘Yes’ and 365 (40.0%) answered ‘No’.

206 owners were able to report if the caesarean section was an elective or an emergency procedure, the results are shown in Table 9. 128 (62.1%) reported the caesarean section to be elective and 78 (37.9%) reported the caesarean section to be an emergency.

	Number affected (C-section 1)	Number affected (C-section 2)	Total
Elective	72	56	128
Emergency	61	17	78
<b>Total</b>	<b>133</b>	<b>73</b>	<b>206</b>

**Table 9:** Shows whether the caesarean section was an elective or an emergency procedure (C-section 1/C-section 2 refers to the first and second caesarean section performed on the same bitch)

Out of 62 known reasons for the caesarean section, dystocia was the most common (51.6%) following by uterine inertia (32.3%) then stillborn (16.1%), as shown in Table 10.

Reasons	Number affected (C-section 1)	Number affected (C-section 2)	Total
Dystocia	26	6	32
Uterine Inertia	18	2	20
Stillborn	9	1	10
Not known	100	36	136
Other	62	16	78
<b>Total</b>	<b>215</b>	<b>61</b>	<b>276</b>

**Table 10:** Reasons for caesarean sections reported in the survey, and their numbers (C-section 1/C-section 2 refers to the first and second caesarean section performed on the same bitch)

The most common answers to “other” were safety/vet recommended (n=12), puppy stuck in birth canal (n=11), breeder choice (n=5) and long labour (n=4).

### Skin and/or Coat Conditions

When asked if any of their dogs have suffered from a skin and/or coat condition(s), out of the 6,586 responses, 2,536 (38.5%) answered “Yes” and 4,050 (61.5%) answered “No”.

The total number of individual skin and/or coat conditions reported was 4,911. Of these, the most commonly reported condition was itchiness/skin irritation, which affected 20.8% of the study sample (1,023 of 4,911). This was followed by allergies – dust, mites, pollen (17.6%), allergies – unknown (16.8%), allergies – food (15.2%) and rash between skin folds (6.3%). Table 11 shows the total number and percentage of dogs affected by each reported skin and/or coat condition in descending order.



Specific condition	Number affected	Percentage
Itchiness/skin irritation	1,023	20.8%
Allergies (dust, mites, pollen etc)	866	17.6%
Allergies - unknown	823	16.8%
Allergies (food)	745	15.2%
Rash between skin folds	310	6.3%
Alopecia	194	4.0%
Dermatitis	166	3.4%
Demodectic mange/ demodex	135	2.8%
Interdigital cysts	102	2.1%
Pododermatitis	93	1.9%
Seasonal alopecia	70	1.4%
Pyotraumatic dermatitis	65	1.3%
Pyoderma	36	0.7%
Lipoma	29	0.6%
Sebaceous cysts	25	0.5%
Sarcoptic mange	7	0.1%
Pigmented cutaneous papillomatosis	4	0.1%
Not known	88	1.8%
Other	130	2.7%
<b>Total</b>	<b>4,911</b>	

**Table 11:** Number and percentage of French Bulldogs affected by each specific skin and/or coat condition, as reported in the survey

The most common answers to “other” for skin and/or coat conditions not already listed in the survey were: dry/flaky skin (n=17), itchy ear/ear infection (n=17), itchy paw (n=14), and histiocytoma (n=8).

## Neurological Conditions

When asked if any of their dogs have suffered from a neurological condition(s), out of the 6,459 responses, 839 (13.0%) answered “Yes” and 5,620 (87.0%) answered “No”.

The total number of individual neurological conditions reported was 1,115. Of these, the most commonly reported condition was intervertebral disc disease (IVDD), which affected 28.6% of the study sample (319 of 1,115). This was followed by hemivertebrae (12.0%), mobility problems (8.9%), epilepsy (5.7%), and paralysis (5.6%). Table 12 shows the total number and percentage of dogs affected by each reported neurological condition in descending order.

Specific condition	Number affected	Percentage
Intervertebral disc disease (IVDD)	319	28.6%
Hemivertebrae (HV)	134	12.0%
Mobility problems	99	8.9%
Epilepsy	63	5.7%
Paralysis	62	5.6%
Seizures	35	3.1%
Tremors	23	2.1%
Degenerative myelopathy (DM)	17	1.5%
Cerebellar ataxia	16	1.4%
Kyphosis	16	1.4%
Vestibular disease	15	1.4%
Loss of vision	13	1.2%
Spinal arachnoid diverticula (SAD)	13	1.2%
Congenital sensorineural deafness	7	0.6%
Spina bifida	7	0.6%
Canine polyneuropathy	4	0.4%
Wobbler's syndrome	3	0.3%
Not known	69	6.2%
Other	200	17.9%
<b>Total</b>	<b>1,115</b>	

**Table 12:** Number and percentage of French Bulldogs affected by each specific neurological condition, as reported in the survey

The most common answers to “other” for neurological conditions not already listed in the survey were: slipped disc (n=37), chiari-like malformation and syringomyelia (n=12), ruptured disc (n=12), malformed/curved spine (n=11) and trapped nerve in spine (n=11).

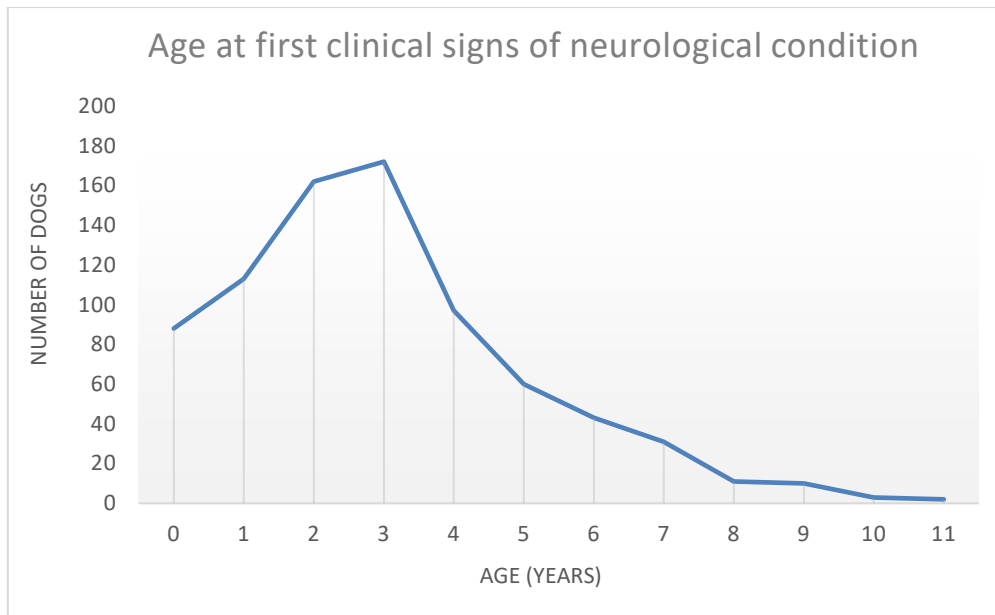
When asked to select the clinical signs seen in their affected dog(s), the most common clinical sign reported was ‘difficulty or reluctance rising, jumping, running or climbing stairs’, which affected 419 dogs (10.4%, 419 of 4,013 reported clinical signs). This was followed by back pain (9.9%), difficulty walking (8.5%), weakness in the hind limb(s) (6.5%) and abnormal posture (5.8%). Table 13 shows the full breakdown of reported clinical signs.

Clinical signs for a neurological condition(s)	Number affected	Percentage
Difficulty or reluctance rising, jumping, running or climbing stairs	419	10.4%
Back pain	397	9.9%
Difficulty walking	339	8.5%
Weakness in the hind limb(s)	259	6.5%
Abnormal posture	232	5.8%
Decreased range of motion	213	5.3%
Collapsing	213	5.3%
Loss of coordination (ataxia) at the hind limbs	207	5.2%
Loss of balance (wobbling)	206	5.1%
Loss of mobility	187	4.7%
Paralysis in the hind limb(s)	186	4.6%
General stiffness	178	4.4%
Decreased muscle tone	174	4.3%
Urinary incontinence	138	3.4%
Head tilt	110	2.7%
Faecal incontinence	99	2.5%
Disorientation	86	2.1%
Complete paralysis	79	2.0%
Abnormal eye movements	71	1.8%
Weakness in the fore limb(s)	42	1.1%
Difficulty swallowing	33	0.8%
None	50	1.3%
Other	95	2.4%
<b>Total</b>	<b>4,013</b>	

**Table 13:** Number and percentage of clinical signs reported in the survey for French Bulldogs affected with neurological conditions

The most common answers to “other” for clinical signs not already listed in the survey were: seizures/fitting (n=16), pain (n=10), sight loss/eye problems (n=7), drooling (n=4), neck pain (n=4) and shaking (n=4).

The median age that affected dogs started to experience the clinical signs associated with a neurological condition was 3 years. Figure 6 shows the total number of affected dogs starting to experience the clinical signs associated with a neurological condition per year of age.



**Figure 6:** Age of French Bulldogs when the owner noticed the first clinical sign associated with the neurological condition(s), as reported in the survey

When asked if any of their dogs have been DNA tested for degenerative myelopathy (DM), out of the 6,967 responses, 1,111 (16.0%) said “Yes” and 5,856 (84.1%) said “No”. Table 14 shows the DNA test results provided by owners.

Test result	Number of dogs	Percentage
Affected	11	0.7%
Carrier	113	7.6%
Clear	942	63.0%
Not known	430	28.7%
<b>Total</b>	<b>1,496</b>	

**Table 14:** Known DNA test results for degenerative myelopathy (DM), as reported in the survey

Table 15 shows a comparison of the DM results held by the Kennel Club for French Bulldogs up to 09/02/2021.

Test result	Number of dogs	Percentage
Affected (or hereditary affected)	69	1.0%
Carrier (or hereditary carrier)	703	9.9%
Clear (or hereditary clear)	6,347	89.2%
<b>Total</b>	<b>7,119</b>	

**Table 15:** DM DNA test results held by the Kennel Club for French Bulldogs up to 09/02/2021

When asked if any of their dogs have ever been suspected as having DM, out of the 6,269 responses, 45 (0.7%) answered “Yes” and 6,224 (99.3%) answered “No”. The suspected diagnosis was confirmed by a veterinary surgeon in 21 of these dogs.

## Ear Conditions

When asked if any of their dogs have suffered from an ear condition(s), out of the 6,254 responses, 1,955 (31.3%) answered “Yes” and 4,299 (68.7%) answered “No”.

The total number of individual ear conditions reported was 2,748. Of these, the most commonly reported condition was recurrent ear infections, which affected 37.7% of the study sample. (1,035 of 2,748). This was followed by excessive ear wax (19.5%), otitis externa (14.7%), otitis media (10.7%), and ear canal stenosis (3.3%). Table 16 shows the total number and percentage of dogs affected by each reported ear condition in descending order.

Specific condition	Number affected	Percentage
Recurrent ear infections	1,035	37.7%
Excessive ear wax	536	19.5%
Otitis externa	405	14.7%
Otitis media	295	10.7%
Ear canal stenosis	90	3.3%
Not known	121	4.4%
Other	265	9.6%
<b>Total</b>	<b>2,748</b>	

**Table 16:** Number and percentage of French Bulldogs affected by each specific ear condition, as reported in the survey

The most common answers to “other” for ear conditions not already listed in the survey were: infrequent ear infection (n=82), haematoma (n=43), allergies (n=30), itchy ears (n=26), yeast infection (n=25) and ear mites (n=25).

## Eye Conditions

When asked if any of their dogs have suffered from an eye condition(s), out of the 6,186 responses, 1,147 (18.5%) answered “Yes” and 5,039 (81.5%) answered “No”.

The total number of individual eye conditions reported was 1,418. Of these, the most commonly reported condition was corneal ulceration, which affected 36.8% of the study sample (522 of 1,418). This was followed by prolapsed gland (17.3%), trauma to the eyeball (6.1%), keratoconjunctivitis sicca (5.2%), and chronic discharge (4.0%). Table 17 shows the total number and percentage of dogs affected by each reported eye condition in descending order.

Specific condition	Number affected	Percentage
Corneal ulceration	522	36.8%
Prolapsed gland	245	17.3%
Trauma to the eyeball	87	6.1%
Keratoconjunctivitis sicca	74	5.2%
Chronic discharge	57	4.0%
Distichiasis	47	3.3%
Cataract (non-inherited)	31	2.2%
Epiphora	30	2.1%
Glaucoma	15	1.1%
Incomplete blink	13	0.9%
Uveal cysts	13	0.9%
Entropion	10	0.7%
Imperforate lower nasolacrimal punctum	6	0.4%
Pigmentary keratitis	6	0.4%
Ectropion	4	0.3%
Retinal dysplasia	2	0.1%
Hereditary cataract (unknown)	1	0.1%
Persistent pupillary membranes (PPM)	1	0.1%
Not known	43	3.0%
Other	211	14.9%
<b>Total</b>	<b>1,418</b>	

**Table 17:** Number and percentage of French Bulldogs affected by each specific eye condition, as reported in the survey

The most common answers to “other” for eye conditions not already listed in the survey were: conjunctivitis (n=45), eye ulcer (n=37), cherry eye (n=23), eye infection (n=22), and ocular dermoid (n=11).

When asked if any of their dogs have ever been eye tested under the BVA/KC/ISDS Eye Scheme, out of the 7,781 responses, 501 (6.4%) answered “Yes” and 7,280 (93.6%) answered “No”.

When asked if any of their dogs have been DNA tested for hereditary cataracts (HC), out of the 7,681 responses, 989 (12.9%) answered “Yes” and 6,692 (87.1%) answered “No”. Table 18 shows the known DNA test results provided by owners.

Test result	Number of dogs	Percentage
Affected	1	0.11%
Carrier	13	1.38%
Clear	926	98.51%
<b>Total</b>	<b>940</b>	

**Table 18:** Known DNA test results for hereditary cataracts (HC), as reported in the survey

Table 19 shows a comparison of the HC results held by the Kennel Club for French Bulldogs up to 09/02/2021.

Test result	Number of dogs	Percentage
Affected (or hereditary affected)	0	0.0%
Carrier (or hereditary carrier)	35	0.2%
Clear (or hereditary clear)	20,126	99.8%
<b>Total</b>	<b>20,161</b>	

**Table 19:** HC DNA test results held by the Kennel Club for French Bulldogs up to 09/02/2021

## Gastrointestinal Conditions

When asked if any of their dogs have suffered from a gastrointestinal condition(s), out of the 5,879 responses, 1,187 (20.2%) answered “Yes” and 4,692 (79.8%) answered “No”.

The total number of individual gastrointestinal conditions was 2,366. Of these, the most commonly reported condition was food allergies/intolerance, which affected 20.0% of the study sample (474 of 2,366). This was followed by flatulence (17.6%), acute gastroenteritis (12.9%), regurgitation (11.9%), and chronic diarrhoea (10.5%). Table 20 shows the total number and percentage of dogs affected by each reported gastrointestinal condition in descending order.

Specific condition	Number affected	Percentage
Food allergies/intolerance	474	20.0%
Flatulence	417	17.6%
Acute gastroenteritis	306	12.9%
Regurgitation	281	11.9%
Chronic diarrhoea	249	10.5%
Impacted anal glands	137	5.8%
Chronic vomiting	136	5.8%
Colitis	104	4.4%
Pancreatitis	73	3.1%
Constipation	39	1.7%
Inguinal hernia	13	0.6%
Not known	33	1.4%
Other	104	4.4%
<b>Total</b>	<b>2,366</b>	

**Table 20:** Number and percentage of French Bulldogs affected by each specific gastrointestinal condition, as reported in the survey

The most common answers to “other” for gastrointestinal conditions not already listed in the survey were: intermittent diarrhoea/vomiting (n=23), giardia (n=18), hiatus hernia (n=15), acid reflux (n=10), sensitive stomach (n=8) and allergies (n=8).

## Heart Conditions

When asked if any of their dogs have suffered from a heart condition(s), out of the 5,849 responses, 145 (2.5%) answered “Yes” and 5,704 (97.5%) answered “No”.

The total number of individual heart conditions reported was 173. Of these, the most commonly reported condition was heart murmur, which affected 66.5% of the study sample (115 of 173). This was followed by pulmonic stenosis (9.3%), irregular heart rate and/or rhythm (8.7%), heart attack (2.3%), and aortic stenosis/subaortic stenosis (1.7%). Table 21 shows the total number and percentage of dogs affected by each reported heart condition in descending order.

Specific condition	Number affected	Percentage
Heart murmur	115	66.5%
Pulmonic stenosis	16	9.3%
Irregular heart rate and/or rhythm	15	8.7%
Heart attack	4	2.3%
Aortic stenosis/subaortic stenosis	3	1.7%
Atrial septal defect (ASD)	2	1.2%
Not known	5	2.9%
Other	13	7.5%
<b>Total</b>	<b>173</b>	

**Table 21:** Number and percentage of French Bulldogs affected by each specific heart condition, as reported in the survey

The most common answers to “other” for heart conditions not already listed in the survey were: enlarged heart (n=4) and enlarged aorta (n=2).

### Kidney and/or Bladder Conditions

When asked if any of their dogs have suffered from a kidney and/or bladder condition(s), out of the 5,837 responses, 160 (2.7%) answered “Yes” and 5,677 (97.3%) answered “No”.

The total number of individual kidney and/or bladder conditions reported was 187. Of these, the most commonly reported condition was urinary tract infection, which affected 57.8% of the study sample (108 of 187). This was followed by urolithiasis (11.8%), cystinuria (5.4%), kidney disease (4.3%), and urethral sphincter mechanism incompetence (2.1%). Table 22 shows the total number and percentage of dogs affected by each reported kidney and/or bladder condition in descending order.

Specific condition	Number affected	Percentage
Urinary tract infection	108	57.8%
Urolithiasis	22	11.8%
Cystinuria	10	5.4%
Kidney disease	8	4.3%
Urethral sphincter mechanism incompetence	4	2.1%
Hyperuricosuria	3	1.6%
Not known	7	3.7%
Other	25	13.4%
<b>Total</b>	<b>187</b>	

**Table 22:** Number and percentage of French Bulldogs affected by each specific kidney and/or bladder condition, as reported in the survey



The most common answers to “other” for kidney and/or bladder conditions not already listed in the survey were: cystitis (n=4), incontinence (n=4), stones (n=3), and urinary crystals (n=3).

### **Muscle, Bone or Joint Conditions**

When asked if any of their dogs have suffered from a muscle, bone or joint condition(s), out of the 5,827 responses, 675 (11.6%) answered “Yes” and 5,152 (88.4%) answered “No”.

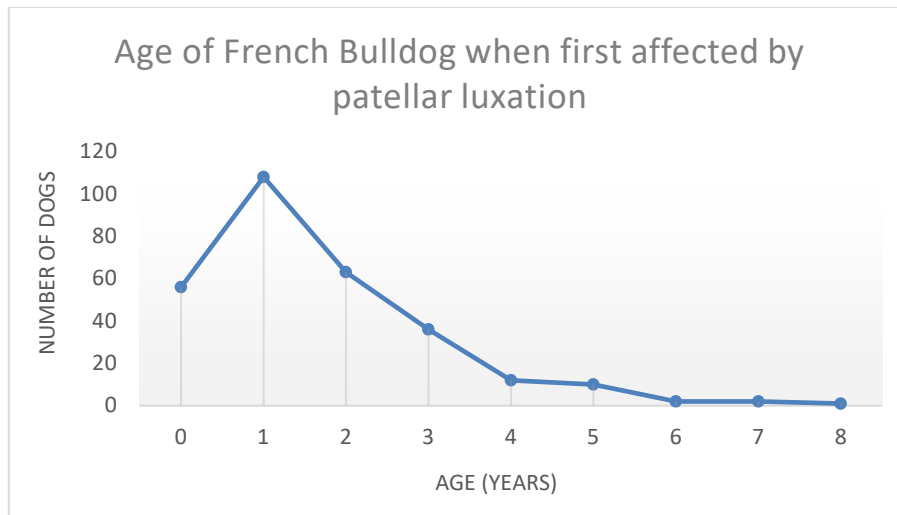
The total number of individual muscle, bone or joint conditions reported was 784. Of these, the most commonly reported condition was patellar luxation, which affected 39.7% of the study sample (311 of 784). This was followed by hip dysplasia (10.8%), lameness (8.8%), cruciate ligament disease (5.2%), and osteoarthritis (4.6%). Table 23 shows the total number and percentage of dogs affected by each reported muscle, bone or joint condition in descending order.

<b>Specific condition</b>	<b>Number affected</b>	<b>Percentage</b>
Patellar luxation	311	39.7%
Hip dysplasia	85	10.8%
Lameness	69	8.8%
Cruciate ligament disease	41	5.2%
Osteoarthritis	36	4.6%
Elbow dysplasia	29	3.7%
Humerus bone fracture	15	1.9%
Muscular dystrophy	4	0.5%
Legg-Calve-Perthes Disease	1	0.1%
Not known	80	10.2%
Other	113	14.4%
<b>Total</b>	<b>784</b>	

**Table 23:** Number and percentage of French Bulldogs affected by each specific muscle, bone or joint condition, as reported in the survey

The most common answers to “other” for muscle, bone or joint conditions not already listed in the survey were: fractured leg (n=11), sprain (n=8), arthritis (n=7) and stiffness (n=5).

The median age that French Bulldogs were first affected by patellar luxation was 1 year and 6 months. Figure 7 shows the total number of dogs affected by patellar luxation per year of age.



**Figure 7:** Age of French Bulldog when first affected with patellar luxation, as reported in the survey

When asked to specify how patellar luxation was diagnosed, out of the 337 responses, the three most commonly reported methods of diagnosis were manipulation by veterinary surgeon (41.0%, 138 of 337), visual diagnosis by veterinary surgeon (24.0%, 81 of 337), and radiography (17.5%, 59 of 337). The responses to patellar luxation diagnosis are shown in Table 24.

Diagnosis	Number of dogs	Percentage
Manipulation by Veterinary Surgeon	138	41.0%
Visual diagnosis by Veterinary Surgeon	81	24.0%
Radiography (X-rays)	59	17.5%
Magnetic resonance imaging (MRI)	16	4.8%
Putnam Patellar Luxation Grading System	11	3.3%
Computerised tomography (CT) scan	8	2.4%
Other	5	1.5%
Not known	19	5.6%
<b>Total</b>	<b>337</b>	

**Table 24:** Number and percentage of reported diagnosis methods for patellar luxation

When asked if any of their dogs had ever had their patellae tested using the Putnam Grading System, out of the 6,350 responses, 527 (8.3%) answered “Yes” and 5,823 (91.7%) answered “No”. Table 25 shows the results provided by owners.

Grade	Number of dogs	Percentage
0	293	66.4%
1	69	15.7%
2	46	10.4%
3	24	5.4%
4	9	2.0%
<b>Total</b>	<b>441</b>	

**Table 25:** Putnam Grading System results for French Bulldog, as reported in the survey

## Cancer

When asked if any of their dogs have suffered from cancer, out of the 5,671 responses, 105 (1.9%) answered “Yes” and 5,566 (98.2%) answered “No”.

The total number of individual cancers reported was 117. Of these, the most commonly reported type of cancer was mast cell tumour - cancerous, which affected 40.2% of the study sample (47 of 117). This was followed by lymphoma (6.8%), mammary tumour – cancerous (6.0%), canine cutaneous histiocytoma (3.4%), and epulis (3.4%). Table 26 shows the total number and percentage of dogs affected by each cancerous condition in descending order.

Specific condition	Number affected	Percentage
Mast cell tumour (cancerous)	47	40.2%
Lymphoma	8	6.8%
Mammary tumour (cancerous)	7	6.0%
Canine cutaneous histiocytoma	4	3.4%
Epulis	4	3.4%
Primary brain tumour (cancerous)	3	2.6%
Testicular tumour (cancerous)	3	2.6%
Testicular tumour (non-cancerous)	3	2.6%
Lipoma	2	1.7%
Mammary tumour (non-cancerous)	2	1.7%
Mast cell tumour (non-cancerous)	2	1.7%
Melanoma	1	0.9%
Primary brain tumour (non-cancerous)	1	0.9%
Superficial Corneal Squamous Cell Carcinoma	1	0.9%
Not known	10	8.6%
Other	19	16.2%
<b>Total</b>	<b>117</b>	

**Table 26:** Number and percentage of French Bulldogs affected by each specific cancerous condition, as reported in the survey

The most common answers to “other” for cancerous conditions not already listed in the survey were: skin cancer (n=3), bone cancer (n=2) and nasopharyngeal carcinoma (n=2).

## Dental/periodontal Conditions

When asked if any of their dogs have suffered from a dental/periodontal condition, out of the 5,573 responses, 173 (3.1%) answered “Yes” and 5,400 (96.9%) answered “No”.

When asked to specify the dental/periodontal condition(s), the most common answers were: teeth extracted (n=39), tooth decay (n=19), periodontal disease (n=14), overcrowding (n=11), teeth misalignment (n=9), excess plaque/tartar (n=8), under bite (n=6), gingivitis (n=6), loose teeth (n=5), epulis (n=4), broken tooth (n=4), extra teeth (n=4), bad breath (n=4), retained puppy teeth (n=4), growth (n=4), missing teeth (n=4), and lost teeth (n=4).

## **Haematological Conditions**

When asked if any of their dogs have suffered from a haematological condition, out of the 5,573 responses, 31 (0.6%) answered "Yes" and 5,542 (99.4%) answered "No".

When asked to specify the haematological condition(s), the most common answers were: clotting problem (n=4), haematoma (n=3), von Willebrand Factor (n=2), mass on spleen/spleen removed (n=2), and immune system attacking red blood cells (n=2).

## **Hepatic Conditions**

When asked if any of their dogs have suffered from a hepatic condition, out of the 5,573 responses, 29 (0.5%) answered "Yes" and 5,544 (99.5%) answered "No".

When asked to specify the hepatic condition(s), the most common answers were: increased liver enzymes (n=6) and liver failure (n=4).

## **Hormonal Conditions**

When asked if any of their dogs have suffered from a hormonal condition, out of the 5,573 responses, 75 (1.4%) answered "Yes" and 5,498 (98.7%) answered "No".

When asked to specify the hormonal condition(s), the most common answers were: phantom pregnancy (n=33), infrequent seasons (n=7), phantom milk production (n=3), split seasons (n=2), vaginitis (n=2), irregular oestrous cycle (n=2), hair loss (n=2), and vaginal hyperplasia (n=2).

## **Additional Conditions not listed in survey**

The respondents were provided with the opportunity to note any conditions not already covered by the previous questions. The conditions listed from the owners by category were:

### **Behavioural**

Three reports of aggression

Two reports of separation anxiety

One report of nervousness

One report of unpredictable behaviour

One report of depression

One report of general behavioural issues

### **Cancer**

Six reports of histiocytoma

Four reports of benign tumour/lump

Two reports of brain tumour

Two reports of tumour

Two reports of ovarian cancer

### **Dermatological**

Nineteen reports of allergies

Seven reports of paw irritation

Five reports of papilloma

Four reports of non-cancerous lumps

Three reports of dew claw problems

Three reports of tail pocket infections

Three reports of wasp/bee allergy

Two reports of lipoma

One report of a reaction to stitches

One report of a dermoid cyst

One report of spots

One report of skin melanoma

One report of a dry nose

One report of severe itching

One report of skin tags

### **Ear**

Seven reports of hearing loss/deafness

Three reports of haematomas

One report of an abscess

One report of polyp in ear

One report of a yeast infection

One report of a total ear ablation

## **Eye**

Two reports of cherry eye

One report of retinal atrophy

One report of conjunctivitis

One report of an overactive tear duct

One report of a benign cyst above the eye

## **Gastrointestinal**

Sixteen reports of hernia

Thirteen report of anal gland issues

Ten reports of blocked anal glands

Eight reports of anal gland abscess

Seven reports of food allergies

Six reports of pancreatitis

Five reports of cleft palate

Four reports of anal gland removal

Four reports of sensitive stomachs

Two reports of irritable bowel

Two report of giardia

Two reports of oesophagus pouch

Two reports of salivary mucocele

Two reports of blocked salivary ducts

Two reports of colitis

Two reports of rectal polyp

One report of oesophagitis

One report of difficulty drinking

One report of gallbladder removal

One report of leaky gut

One report of water infection

One report of tonsillitis

One report of vomiting

One report of megaoesophagus

One report of oesophagus stricture

One report of a twisted small intestine

### **Haematological**

Three reports of pneumonia

Three reports of internal bleeding with removal of spleen

### **Hormonal**

Six reports of Cushing's disease

One report of irregular seasons

One report of hyperthyroidism

One report of enlarged adrenal gland

### **Immunological**

Three reports of vaccine reactions

Two reports of lupus

One report of canine herpes virus

### **Muscle, bone or joint**

Seven reports of screw tail and deep tails pockets

Three reports of a fractures limb

Three reports of an inverted tail

Two reports of carpal deformities

Two reports of pigeon chest

One report of a pulled muscle

One report of back trauma

One report of a ruptured knee

One report of cruciate ligament rupture

One report of limping

One report of possible IVDD  
One report of hip dysplasia  
One report of patellar luxation  
One report of leg pain  
One report of dwarfism  
One report of masticatory muscle myositis  
One report of an incomplete tail blocking anus  
One report of an inverted sternum

### **Neurological**

Eleven reports of seizures/fitting  
Seven reports of meningitis  
Six reports of epilepsy  
One report of head tremors  
One report of CM/SM  
One report of a stroke  
One report of brain haemorrhage  
One report of fluid around the brain  
One report of degenerative spinal disease  
One report of calcification of spine/rib cage  
One report of slipped discs  
One report of extra vertebrae  
One report of a trapped nerve

### **Reproductive**

Four reports of an undescended testicle  
Three reports of uterus infection/pyometra  
Three reports of an enlarged prostate  
Two reports of phantom pregnancy  
One report of a recurring penis infection



One report of enlarged nipples

One report of vaginoplasty

One report of vaginitis

One report of irregular seasons

One report of vaginal prolapse

### **Respiratory**

Two reports of reverse sneezing

Two reports of nasal hyperkeratosis

One report of throat inflammation

One report of kennel cough

One report of collapsed airways

One report of mass removal from larynx

One report of acid reflux

One report of nose infection

### **Urinary**

One report of cystitis

One report of urinary tract infection

One report of congenital kidney dysplasia

One report of incontinence

### **Other**

Five reports of heat intolerance

Two reports of hay fever